Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

CONDITIONAL MAJOR (DRAFT/PROPOSED) NO. F-01-001
WEYERHAEUSER COMPANY
HENDERSON, KENTUCKY
FEBRUARY 7, 2001
SREENIVAS KESARAJU, REVIEWER
PLANT I.D. # 21-101-00117
APPLICATION LOG # 51310 (G529)

SOURCE DESCRIPTION:

Weyerhaeuser Company operates a recycle mini-mill in Henderson, Kentucky. The mini-mill will recycle old corrugated container and produce liner board. The liner board will be sold or reused to construct new corrugated containers.

Weyerhaeuser Company, has applied for a permit renewal. Weyerhaeuser Company (WC) was previously Macmillan Bloedel Packaging Inc. A federally enforceable permit (F-94-013) was issued on December 29, 1994, to authorize construction of the plant. The permit limited the emissions of sulfur dioxide, particulate and nitrogen oxide to be below 83.22 TPY, thus making it a conditional major source with respect to above pollutants. The maximum quantity of heat input into the boiler was limited to 190 MM Btu/hr. The permit also had the condition to solely fire the boiler with natural gas. The company assumed these permit conditions to preclude the applicability of Title V of the Clean Air Act. The plant started operation in December of 1995.A significant revision to the permit F-94-013 was issued on October 27, 1997 for increased daily design capacity of the paper from 400 machine dry tons per day to 458 machine dry tons per day and the increased boiler heat input capacity from 190 MM BTU per hour to 220 MM BTU per hour. Also, a secondary fuel (Propane/Air) was added to fire the boiler for 10% of the time. The Division for Air Quality (DAQ) has concluded that the proposed changes were significant and the permit revision, F-94-013 (Revision 1) was issued according to 401 KAR 50:035, Section 16, Significant Permit Revisions. This source would still be classified as major (based on uncontrolled emission potential and allowable emission rates), except for the inclusion of federally enforceable conditions in the draft permit. The plant is classified as a conditional major source with respect to NO_X emissions.

The permits F-94-013 and F-94-013 (Revision 1) required WC to continuously monitor NOx emissions from the boiler (Emission Point 07) in accordance with the provisions of 40 CFR 60, Subpart Db, Section 60.48b. However the CEM was never installed. The Division issued a NOV in March 1998. WC has proposed to install a PEMS software in lieu of the CEM system to continuously monitor NOx emissions and report the information as required by 40 CFR 60.49b(g). However as per 40 CFR 60.49b(c), each affected facility subject to the nitrogen oxides standard of 40 CFR 60.44b who seek to demonstrate compliance with the standards through the monitoring of steam generating unit operating conditions under the provisions of 40 CFR 60.49b(g)(2) shall submit a approval plan to the Administrator (KYDAQ) a approval plan within 360 days of the initial startup of the affected facility. In the conference call the Division had with the company and U.S. EPA, it was decided that WC can still do PEMS after 360 days after the start up with EPA's approval. Also, the Division was advised to forward the PEMS RATA and 30-Day Initial Compliance Test Report on PEMS and package boiler for EPA review after the Division

has reviewed. MB has performed the PEMS RATA on the package boiler after the Division has approved the testing plan. MB has submitted the PEMS RATA and 30-Day Initial Compliance Test Report on PEMS and package boiler in January 1999. The Division has reviewed the data, analysis, and supporting information. The example guidance provided in the TTN web on PEMS (specifications, test procedures, monitoring protocol etc.) was used to assist in the determination. The Division has requested WC to submit additional information on the Sensor Drift Study. After the review of the information submitted, the Division has made the determination that the PEMS and the reporting package associated with the PEMS are acceptable.

The Division's determination and support information (EPA PEMS RATA and Compliance Test Report) was forwarded to EPA for its comments on April 29, 1999. U.S. EPA has requested for more information on January 10, 2000. The Division has requested WC for the information and the required information was submitted to EPA on August 7, 2000. On October 20, 2000, U.S. EPA has approved WC to use PEMS data as an alternative to use CEM data for the initial 30-day NOx compliance determination and also use PEMS for the ongoing monitoring required under Subpart Db.

The revised permit will allow WC to use PEMS for compliance with NOx excess emissions requirement (See permit for specific conditions).

COMMENTS:

The emission points are described below:

Emission Points 01 through 06:

01 (01) Saveall Thickener

Description:

De-watering Device to aid in the removal of water from the pulp slurry.
Maximum Capacity: 33.3 Machine Dry Tons of paper/hr
Construction Commenced: January 1995
Material Used: Biocide

02 (02) Bottom-Ply Section

Description:

Consists of bottom-ply head box (distribution point for pulp slurry) and bottom-ply web section. This equipment forms bottom-ply section of two-ply liner board. The bottom-ply headbox in combination with the top-ply section, press section and dryer section make up the paper machine.
Maximum Capacity: 33.3 Machine Dry Tons of paper/hr
Construction commenced: January 1995
Material Used: Retention Aid, Foamtrol, CC-B1

03 (03) Top-Ply Section

Description:

Consists of top-ply head box (distribution point for pulp slurry) and top-ply web section. This equipment forms top-ply section of two-ply liner board.
Maximum Capacity: 33.3 Machine Dry Tons of paper/hr
Construction commenced: January 1995

Material Used: Retention Aid, Foamtrol, CC-B1

04 (04) Press Section

Description:
Consists of two individual presses (Series of Rollers)
Maximum Capacity: 33.3 Machine Dry Tons of paper/hr
Construction commenced: January 1995
Materials Used: Retention Aid, Foamtrol, CC-B1, CC-B

05 (05) Dryer Section

Description:
Consists of three individual dryer sections (series of rollers), which receive steam from the 220 mmbtu/hr boiler, (Em Pt 07).
Maximum Capacity: 33.3 Machine Dry Tons of paper/hr
Construction commenced: January 1995
Materials Used: Retention Aid, Foamtrol, CC-B1, CC-B

06 (06) Aeration Basin

Description:
65,100 ft^2 aeration basin with six(6) aeration units
Maximum Capacity: 6 million gallons
Construction commenced: January 1995

The major emissions from theses processes are VOC and HAP. This process comes under the provisions of **401 KAR 63:020**, *Potentially hazardous matter or toxic substances*, applies to the toxic emissions. [April 9,1972]

Emission Factors and Emissions Calculations:
Emissions are calculated from AP-42 emission factors, Engineering Estimates and Source tests.

Periodic Monitoring:
The Division has done modeling using Tscreen to analyze the air toxics concentrations to see if the emissions are below the EPA, Region 9, Preliminary Remediation Goals (PRGs) for Ambient Air. The results have shown that all the toxics emissions will be less than the respective PRGs. The permit requires WC to use Screen 3 or ISCST3 modeling to calculate the toxics concentrations in case of addition of new solvents. The permit also requires WC to keep a copy of the PRGs available at site for reference.

Emission Points 07 – 220 mmBtu/hr Boiler

The process and the applicable requirements are described above in the source description.

Emission Factors and Emissions Calculations:
Emissions are calculated from AP-42 emission factors, and Source tests.

Periodic Monitoring:
As described in Source Description above, the PEMS will be used to monitor the NOx excess emissions. The five boiler operating parameters (Fuel Flow, Oxygen Content, boiler air flow, inlet temperature, and the outlet temperature) will be monitored continuously using sensors and the data recorded is used to calculate the NOx emissions using PEMS model.

EMISSION AND OPERATING CAPS DESCRIPTION:

The source wide emissions of Nitrogen Oxide (NOx) are limited to 96.36 TPY to stay below the major source threshold of 100 TPY.

OPERATIONAL FLEXIBILITY:

N/A

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.